State of California The Resources Agency of California

Memorandum

To: Commissioner Jeffrey D. Byron, Presiding Member
Commissioner James D. Boyd, Associate Member

Date : July 11, 2006
Telephone: (916) 651-8891
File: 06-SPPE-2

From : **California Energy Commission** Mary Dyas
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Energy Facility Siting Project Manager

Subject: **EI CENTRO UNIT 3 REPOWER SMALL POWER PLANT EXEMPTION (06-SPPE-2)**

ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the El Centro Unit 3 Repower Application for a Small Power Plant Exemption (06-SPPE-2). This report serves as a preliminary scoping document that identifies potential issues that Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present this Issue Identification Report at the Siting Committee's Informational Hearing to be held in El Centro, Imperial County in late July or early August.

Attachment

cc: Docket (06-SPPE-2)
POS

EL CENTRO UNIT 3 REPOWER
SMALL POWER PLANT EXEMPTION
(06-SPPE-2)

ISSUES IDENTIFICATION REPORT

July 11, 2006

CALIFORNIA ENERGY COMMISSION

Facilities Siting Division

ISSUES IDENTIFICATION REPORT

EL CENTRO UNIT 3 REPOWER
APPLICATION FOR SMALL POWER PLANT EXEMPTION
(06-SPPE-2)

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ISSUES IDENTIFICATION REPORT

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of potential issues that have been identified in the case, thus far. This Issues Identification Report contains a project description, summary of the potential issues, and a discussion of the proposed project schedule. The staff will address these issues and progress towards resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

On May 19, 2006, Imperial Irrigation District (IID) filed an application for a Small Power Plant Exemption (SPPE). The IID is seeking an exemption from the California Energy Commission's licensing requirements. IID proposes to replace an existing steam-generating unit within the site of the existing El Centro Generating Station (ECGS) located at 485 East Villa Avenue, in El Centro, Imperial County, California. The El Centro Unit 3 Repower Project would be owned and operated by IID, with the facility continuing to serve the growing electrical load demands of the region.

The Unit 3 repower will replace an existing boiler with a General Electric Frame 7EA dry low NOx combustion turbine generator and heat recovery steam generator to supply steam to the existing steam turbine generator. The generator output voltage from the Unit 3 repower will be stepped up to transmission system voltage and connected to the existing IID El Centro Switching Station also located within the ECGS property. Most of the existing Unit 3 plant systems, such as the cooling tower will continue to be used with only minor modifications. The Unit 3 repower will increase the existing Unit 3 generating capacity by 84 megawatts (MW) from 44 MW to 128 MW. The new combustion turbine generator step-up transformer will connect with the existing 92-kV portion of the El Centro Switching Station via an overhead line approximately 2,350 feet long and 50 to 80 feet high. The new transmission facilities are entirely within the existing El Centro Switching Station and adjacent areas within the EGCS property.

The Unit 3 repower will connect to the existing Southern California Gas Company high pressure gas metering station located on the existing ECGS property. Minor modifications at the ECGS site will be performed to support the proposed project including changes to the metering station for increasing the flow of high-pressure gas through the station serving the new Unit 3 combustion turbine.

Annual water consumption for the Unit 3 repower is expected to be approximately 1,125 acre-feet which is an increase of 96 acre-feet from the current annual use. The existing ECGS uses raw water from IID's Dogwood surface canal Gate 54B for cooling tower make-up. An existing demineralization system treats the raw water to provide high quality make-up water. These existing systems will be used to meet the expected water requirements for the proposed project. IID also proposes to eliminate the surface discharge from the entire ECGS and dispose of the wastewater to a deep injection well system, consisting of two Class I non-hazardous wastewater deep injection wells

approximately 2,000 feet below ground surface. These wells will be located on the ECGS property.

The El Centro Unit 3 repower project will be equipped with Best Available Control Technology (BACT) to control air pollutant emissions. The equipment used to control emissions includes a combustion turbine generator (CTG) and heat recovery steam generator (HRSG). The emission control system for the CTG/HRSG consists of an anhydrous ammonia based Selective Catalytic Reduction (SCR) system and CO oxidation catalyst emission control system to further reduce emissions down to 2 ppm NOx and 4 ppm CO.

If the exemption is approved by the Energy Commission, the IID will acquire all necessary permits for project construction. Following the acquisition of these permits, the IID Board is expected to release major equipment for fabrication and retain the services of an engineering, procurement and construction contractor. The start of commercial operation is expected in May 2009. IID estimates the construction costs of the Unit 3 repower to be $73.5 million.

The IID expects to employ up to approximately 73-98 construction workers over a 20 month period beginning in September 2007. Operation of the project will require no additional workers. Annual operation costs are estimated to be approximately $3.5 millon.

SPPE PROCESS AND POTENTIAL MAJOR ISSUES

Public Resource Code section 25541 states "[t]he commission may exempt ... thermal power plants with a generating capacity of up to 100 megawatts and modifications to existing generating facilities that do not add capacity in excess of 100 megawatts, if the commission finds that no substantial adverse impact on the environment or energy resources will result from the construction or operation of the proposed facility or from the modifications." The SPPE process is different from the Application for Certification (AFC) process since the Energy Commission will not license the project but exempt the project from the licensing process. If an exemption is granted, the applicant will need to secure the appropriate licenses and permits for the project from various local, state and federal agencies. The Energy Commission is the lead agency under the California Environmental Quality Act (CEQA).

The SPPE process also uses a different format of analysis from that used in the AFC process. For an SPPE, staff prepares an Initial Study that evaluates whether the project will result in any significant environmental or energy resource impacts, identifies mitigation measures that will reduce those impacts to less than significant levels, and establishes proposed conditions of exemption. Staff will use the Environmental Checklist Form contained in CEQA Guidelines Appendix G (California Code of Regulations, Title 14, section 15063 (f)) as a guideline for the issues that will be examined in the Initial Study.

This Issues Identification Report contains staff's preliminary findings. The following discussion focuses on the issues where staff has concluded that (a) a "potentially

significant impact" may occur, (b) resolution of the issue may cause delay in the schedule, and/or (c) staff has insufficient information at this time to reach a conclusion. The Committee should be aware that this report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns.

This report does not limit the scope of staff's analysis throughout this proceeding but acts to aid in the analysis of potentially significant issues that the El Centro Unit 3 Repower proposal may pose. The following discussion summarizes the potential issues, identifies the parties needed to resolve the issues and, where applicable, suggests a process for achieving resolution. However, staff does not see these potential issues as insolvable.

The following section contains staff's preliminary findings. The Initial Study will provide additional analysis supporting staff's conclusions, descriptions of the recommended mitigation measures and conditions of exemption.

AIR QUALITY

Staff reviewed the application for the El Centro Small Power Plant Exemption (SPPE) and found a potential air quality issue that could delay the Commission review process.

Inter-pollutant Trading

This issue relates to the use of sulfur oxides (SOx) emission reduction credits to mitigate the project particulate matter (PM10) emissions through an inter-pollutant trading approach.

The applicant proposes to use 2.5 pounds of SOx emission reduction credits that they already own to mitigate every pound of the project's new PM10 emissions. Because SOx is a precursor to PM10 air contaminant, its use for mitigation of PM10 is acceptable if the appropriate inter-pollutant trading ratio is determined for the air basin's meteorological conditions and emissions inventories. To make this determination, Energy Commission staff, Imperial County Air Pollution Control District (District) staff and agencies must rely on analytical studies that are specifically geared toward the actual environment of the area surrounding the project site. Such a study would need to find the nexus between measured concentrations of SOx and SOx- related PM10, which in most cases, requires photochemical modeling analysis. The modeling itself is not a time consuming task, but the effort to get the data for such a modeling exercise could cause a significant delay in the review process.

Staff plans to work with the California Air Resources Board (CARB), the United States Environmental Protection Agency (USEPA), the District staff, and the applicant to find an alternative method, such as one that is based on emission inventories and ambient air quality data for SOx and PM10. If the parties are successful with this approach, the potential delays could be minimized.

NOISE

Energy Commission staff evaluates power plant operational noise impacts on sensitive receptors by comparing the noise levels at the receptor with the power plant operating, to the ambient noise levels at the receptor before the project is constructed. Specifically, staff compares power plant noise to the background (L_{90}) noise levels at the receptor during the nighttime hours, when people are most likely to be annoyed by excessive noise. In order to eliminate the effects of short-term anomalies, staff typically considers the average of the four quietest contiguous hours of the night for this comparison. In describing the pre-project ambient noise survey results, the Application presents only broadly averaged figures. Background noise levels at the nearest sensitive receptor (LT-1, a residence at 1017 North 3rd St.) are depicted as single 25-hour average figures for L_{eq} and L_{90}, instead of the 25 hours' worth of one-hour L_{eq} and L_{90} averages needed for our standard analysis.

The applicant has calculated the noise levels that the project is likely to produce at the project property lines, and at the purportedly nearest sensitive receptor, the residence at LT-1, which is exposed to the western aspect of the project. However, the application also states that the residence at 2161 North Dogwood Road, known as location ST-1, is nearer the project. ST-1 is exposed to the northern aspect of the project, which is calculated to produce noise levels 13 decibels greater than the western aspect.

Noise Impacts

It appears that the nighttime ambient background noise levels at the nearest sensitive receptors (residences) may be lower than shown by the broadly averaged figures presented in the application. If this is the case, then project noise impacts on these receptors will be greater, and may require mitigation. Staff's data request Noise-1 asks for the hourly average L_{eq} and L_{90} values measured at LT-1 during the 25-hour ambient noise survey.

It appears that the residence at ST-1 will be exposed to project noise levels substantially greater than the residence at LT-1. Staff's data request Noise-2 asks for the calculated noise levels that can be expected at ST-1.

SUMMARY

Staff provided air quality and noise data requests to IID on June 19, 2006, which address its concerns regarding the El Centro Unit 3 Repower. Staff will address any additional technical concerns in the Initial Study. Timely responses to data requests and resolution of the above issues are necessary to stay within the time frames of the attached proposed schedule. All agencies, intervenors, and interested parties will be informed of future workshops and project events. The following page presents staff's proposed schedule.

ENERGY COMMISSION STAFF'S
PROPOSED SCHEDULE
EL CENTRO UNIT 3 REPOWER
(06-SPPE-2)

EVENT	DATE
Applicant files application for SPPE	19-May-06
Data Requests Sent to IID	20-Jun-06
Committee Appointed	29-Jun-06
Issue Identification Report Filed	30-Jun-06
Data Responses Received from Applicant	19-Jul-06
Status Report	July-06
Site Visit/Information Hearing	4-Aug-06
Data Response/Issues Resolution Workshop	4-Aug-06
Notice Draft Initial Study Workshop	14-Aug-06
File Draft Initial Study	18-Aug-06
Draft Initial Study Workshop	28-Aug-06
Prehearing Conference	5-Sep-06
Notice of Intent to File Negative Declaration (Neg. Dec.)	20-Sep-06
Issue Final Initial Study	20-Sep-06
Evidentiary Hearings	Oct-06
Committee Files Proposed Decision / Neg. Dec.	Nov-06
Staff/Parties File Comments Proposed Decision/Neg. Dec.	Nov-06
Final Hearing on Decision / Neg. Dec.	Nov-06

Note: All dates are approximate and will be determined by staff and committee. Actual dates will be announced by staff notices or Committee order.